



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,700	10/31/2003	Suresh Katukam	CISCP849	1908
54406	7590	05/14/2007		
AKA CHAN LLP / CISCO 900 LAFAYETTE STREET SUITE 710 SANTA CLARA, CA 95050			EXAMINER FAROUL, FARAH	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 05/14/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/698,700	Applicant(s) KATUKAM, SURESH	
	Examiner Farah Faroul	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-31 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>06/24/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The following Office Action is based on Application No. 10/698,700 filed on October 31, 2003 having claims 1-31 and Figures 1-9.

#### ***Drawings***

2. The drawings are objected to because the drawings fail to show the claimed "code devices". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including

Art Unit: 2616

annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

### ***Specification***

3. The disclosure is objected to because of the following informalities:

Applicant needs to update the status of copending applications mentioned in pages 12-13 of the disclosure.

Appropriate correction is required.

### ***Claim Objections***

4. Claims 2-6, 10, 19, 22, 24-25 and 27-31 are objected to because of the following informalities:

For claims 2-6, 10, 19, 22, 24-25, and 27-31, it is suggested that applicant delete the word "the" in front of the phrase "at least" in all lines of the claims. Appropriate correction is required.

In claim 10, it seems that the word "links" is missing between the phrases "the plurality of" and "and the cost". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 and 24-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-10 and 24-31 recite the limitation "code devices". It is suggested that applicant clarify what is meant by "code devices". If applicant is referring to "computer codes", the computer codes would need to be executed to perform the claim functions.

Claim 7 recites the limitation "the device" in line 1. There is no antecedent basis for this limitation in the claim. If applicant is referring to the "code devices" or "one of the code devices", applicant needs to modify the claim to make it clear.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 7-8, 11-14, 18-22 and 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haskin et al. (US 6,813,242 B1) in view of Frannhagen et al. (US 2002/0181490 A1).

For claims 1, 11-12, 19, 24 and 28, Haskin discloses determining the primary path using a routing algorithm, wherein the primary path includes a protectable segment (column 3, lines 30-45 wherein a primary circuit path includes a protectable segment)

Creating the alternate path using the routing algorithm, wherein creating the alternate path includes creating the alternate path between the start node and the end node such that the alternate path is arranged to protect at least the protectable segment (column 3, line 61 to column 4, line 20 wherein a unidirectional alternate path is created and arranged to support the protectable segment)

The protectable segment is a path-protected segment and the alternate path is arranged to protect the path-protected segment (column 3, line 61 to column 4, line 20 wherein a unidirectional alternate path is created and arranged to support the protectable segment)

For claims 1, 11-12, 19, 24 and 28, Haskin discloses the entire claimed invention except for wherein the protectable segment includes a first line-protected link

Frannhagen, from the same or similar field of endeavor, teaches 1+1 line-protected link in an optical network (paragraphs 40 to 42, paragraphs 56-57 and Figure 4, elements 401 and 402)

Thus, it would have been obvious to someone of ordinary skill in the art to combine the line-protected path mechanism of Frannhagen with the alternate path-rerouting method of Haskin. The line-protected path method of Frannhagen is combined with the alternate path rerouting method by including the mechanism into the path-protected segment of the primary path. The motivation to combine the line-protected path method with the alternate path rerouting method is that it provides an efficient end-to-end circuit path computation technique.

For claims 2, 4, 20, 25 and 29, Frannhagen discloses that the protected link is a 1+1 protection link (paragraph 40, lines 1-10 wherein the circuit path is a 1+1 line protected path)

For claims 18, 21, 26 and 29, Frannhagen discloses the overall circuit path is a unidirectional path-switched ring (paragraph 40, lines 1-10 wherein the overall circuit path is unidirectional path-switched ring (UPSR))

For claims 3, 13, 22, 27, and 30, Haskin discloses creating the alternate path includes using the routing algorithm (column 3, line 61 to column 4, line 20 wherein a unidirectional alternate path is created using the same routing algorithm as the primary path)

For claims 7-8, Haskin discloses the device is associated with the first node and the code devices are arranged to implement the primary circuit and the alternate circuit path (Figure 3, elements 1, 2 and 7 wherein the devices are arranged to implement the primary and alternative paths)

For claim 14, Haskin discloses that a first node associated with the start and a second node associated with the end are included in the alternate path (Figure 1, boxes 1, 4 and 7 wherein the source and destination nodes are included in the alternate path)

7. Claims 9, 15-16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haskin and Frannhagen as applied to claims 1 and 11 above, and further in view of Siu et al. (US 6,744,769 B1).

For claims 9, 16 and 23, Haskin and Frannhagen discloses the entire claimed invention except the primary path is a lowest cost circuit path between the first node and the second node and the alternate circuit path is a lowest circuit path between the first node and the second node which protects the primary circuit path

Siu, from the same or similar field of endeavor, teaches selecting a lowest cost path between a source node and a destination node (column 12, lines 6-17).

Thus, it would have been obvious to someone of ordinary skill in the art to combine the path provisioning method of Siu with the modified system of Haskin and Frannhagen at the time of the invention. The path provisioning method of Siu is implemented into the modified system of Haskin and Frannhagen by selecting the shortest or lowest cost path as the primary or alternative path in the modified system. The motivation to combine the path provisioning method of Siu with the modified system of Haskin and Frannhagen is that it provides an efficient end-to-end circuit path computation technique.



For claim 15, Haskin and Frannhagen discloses the entire claimed invention except for the primary path being the shortest path between the start node and the destination node

Siu, from the same or similar field of endeavor, teaches selecting the shortest path between the source and destination nodes (column 9, lines 42-54).

### ***Allowable Subject Matter***

8. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

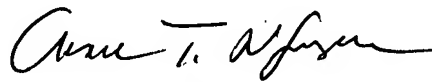
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cao et al. (US 2002/0181485 A1), Gorshe (US 6,690,644 B1), Doshi et al. (US 6,073,248) are cited to show systems pertinent to applicant's invention. Doshi discloses a distributed precomputation technique of signal paths in an optical network. Gorshe discloses a mechanism for UPSR path-switched protection switching. Cao discloses an apparatus and method for Internet protocol flow ring protection switching.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farah Faroul whose telephone number is 571-270-1421. The examiner can normally be reached on Monday - Friday 6:30 AM - 4 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

F. Faroul



CHAU NGUYEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600